

What is claimed is:

- 1 1: A method for at least partially compensating luminance of an emissive display
- 2 comprising:
 - 3 estimating the amount of degradation of one or more organic light emitting diodes
 - 4 (OLEDs) included in said emissive display; and
 - 5 adjusting the luminance of said one or more OLEDs based, at least in part, upon
 - 6 said estimate.
- 1 2: The method of claim 1, wherein adjusting comprises adjusting the luminance so that
- 2 said luminance remains substantially constant substantially independent of the amount of
- 3 degradation of said one or more OLEDs.
- 1 3: The method of claim 2, wherein estimating includes estimating a characteristic
- 2 substantially correlated with said degradation.
- 1 4: The method of claim 3, wherein said estimating includes measuring the voltage across
- 2 said one or more OLEDs at a substantially constant current flow through said one or
- 3 more OLEDs.
- 1 5: The method of claim 2, wherein measuring said voltage across said one or more
- 2 organic light emitting diodes (OLEDs) includes measuring the reverse bias resistance of
- 3 said one or more OLEDs.
- 1 6: The method of claim 1, wherein adjusting includes adjusting the amount of electrical
- 2 energy applied to said one or more organic light emitting diodes (OLEDs).

1 7: The method of claim 6, wherein adjusting includes increasing the voltage applied
2 across said one or more OLEDs.

1 8: The method of claim 7, wherein increasing includes utilization of a lookup table.

1 9: The method of claim 8, wherein said lookup table includes values such that the
2 luminance of said one or more organic light emitting diodes (OLEDs) achieved by the
3 adjustment essentially decreases over time.

1 10: The method of claim 1, wherein said method further comprises adjusting the
2 luminance of said one or more organic light emitting diodes (OLEDs) based, at least in
3 part, upon estimating the amount of degradation of one or more other organic light
4 emitting diodes (OLEDs).

1 11: An apparatus comprising:

2 one or more organic light emitting diodes (OLEDs);

3 a measurement circuit; and

4 a control system;

5 wherein said OLEDs, said measurement circuit and said control system are

6 coupled so that, during operation, said measurement circuit, estimates the amount of

7 degradation of said one or more OLEDs and said control system adjusts the luminance of

8 said OLEDs, based at least in part upon said estimated degradation.

1 12: The apparatus of claim 11, wherein said control system is capable of adjusting the
2 luminance so that said luminance remains substantially constant substantially
3 independent of the amount of degradation of said one or more OLEDs.

1 13: The apparatus of claim 1, wherein the estimation of the amount of degradation, made
2 by said measurement circuit, includes an estimation of a characteristic substantially
3 correlated with said degradation.

1 14: The apparatus of claim 13, wherein said measurement circuit is capable of measuring
2 the reverse bias resistance of said one or more organic light emitting diodes (OLEDs)
3 operating at a substantially constant current.

1 15: The apparatus of claim 12, wherein said control system is capable of adjusting said
2 luminance of said one or more organic light emitting diodes (OLEDs) by adjusting the
3 substantially instantaneous current through said OLEDs.

1 16: The apparatus of claim 11, wherein said control system comprises a series of data
2 that correlates a desired luminance with the estimated degradation of said one or more
3 OLEDs.

1 17: The apparatus of claim 16, wherein said control system utilizes said series of data to
2 adjust the luminance of said one or more OLEDs.

1 18: The apparatus of claim 17, wherein said control system comprises a series of data
2 that correlates a desired luminance with the estimated degradation of said one or more
3 OLEDs such that said desired luminance decreases as said estimated degradation of said
4 one or more OLEDs increases.

1 19: The apparatus of claim 12, wherein said control system includes a storage medium
2 having a plurality of machine accessible instructions, wherein, when said instructions are
3 executed by said control system, the instructions provide for

4 utilizing a signal from said measuring circuit;
5 estimating a desired luminance for said OLEDs; and
6 adjusting the current applied to said OLEDs based at least in part upon said
7 signal.

1 20: A system comprising:
2 a receiver which receives, from a source physically remote from said system,
3 video signals in a digital format;
4 an array of one or more organic light emitting diodes (OLEDs);
5 a measurement circuit; and
6 a control system;
7 wherein said receiver disperses said digital signals to said array of OLEDs, and
8 wherein said array of OLEDs, said measurement circuit and said control system
9 are coupled so that, during operation, said measurement circuit, estimates the amount of
10 degradation of said one or more OLEDs and said control system adjusts the luminance of
11 said OLEDs, based at least in part upon said estimated degradation.

1 21: The system of claim 20, wherein said control system is capable of adjusting the
2 luminance so that said luminance remains substantially constant substantially
3 independent of the amount of degradation of said array of OLEDs.

1 22: The system of claim 20, wherein the estimation of the amount of degradation, made
2 by said measurement circuit, includes an estimation of a characteristic substantially
3 correlated with said degradation.

- 1 23: The system of claim 22, wherein said measurement circuit is capable of measuring
2 the reverse bias resistance of said at least one OLED operating at a substantially
3 predetermined current.
- 1 24: The system of claim 22, wherein said control system is capable of adjusting said
2 luminance of said array of organic light emitting diodes (OLEDs) by adjusting the
3 substantially instantaneous current through said array of OLEDs.
- 1 25: The system of claim 24, wherein control system includes a storage medium having a
2 plurality of machine accessible instructions, wherein, when said instructions are executed
3 by said control system, the instructions provide for
4 utilizing a signal from said measuring circuit;
5 estimating a desired luminance for said OLEDs; and
6 adjusting the current applied to said OLEDs based at least in part upon said
7 signal.
- 1 26: The system of claim 24, wherein said control system comprises a series of data that
2 correlates a desired luminance with the estimated degradation of said array of OLEDs
3 and said control system utilizes said series of data to adjust the luminance of said array of
4 OLEDs.
- 1 27: The system of claim 26, wherein said control system comprises a series of data that
2 correlates a desired luminance with the estimated degradation of said one or more
3 OLEDs such that said desired luminance decreases as said degradation of said one or
4 more OLEDs increases.

1 28: The system of claim 21, wherein said control system comprises a plurality of control
2 sub-systems, said respective sub-systems to adjust the output luminance of a particular
3 respective sub-set of said array of one or more organic light emitting diodes (OLEDs).

1 29: The system of claim 28, wherein the organic light emitting diodes (OLEDs) of said
2 array is coupled to a measurement circuit and control system which is capable of
3 measuring the degradation of said respective OLEDs and is capable of respectively
4 adjusting the luminance of said respective OLEDs.